

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Allowable Subject Matter

2. Claim 6 is allowed.
3. The following is an examiner's statement of reasons for allowance:

None of the prior art of record, alone or in combination appear to teach, suggest, or render obvious the invention of at least claim 6.

Claim 6 teaches a method for producing a microporous composite membrane comprising the steps of (1) coating at least one surface of a microporous polyolefin membrane with a solution of a gelable fluoro-resin in a mixed solvent of a good solvent for said fluoro-resin and a poor solvent having a dipole moment of 1.8 Debye or less and a higher boiling point than that of said good solvent, such that the resultant porous coating layer of said fluoro-resin has a thickness of 0.4-1.0 μm , said fluoro-resin being a hexafluoropropylene-vinylidene fluoride copolymer, and (2) heating it to evaporate said good solvent earlier than said poor solvent, so that said porous coating layer has cylindrical penetrating pores, which are fine pores penetrating substantially

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perpendicularly from openings to a surface in contact with said microporous polyolefin membrane while keeping circular cross sections of substantially the same diameters, and have a larger average diameter than the maximum pore diameter of said microporous polyolefin membrane.

None of the prior art pieces of record teach, suggest, or render obvious the disclosed method. The prior art of record (such as JP 2002-240215 (Kono)) teaches a similar membrane structure but does not teach a method of heating to evaporate a good solvent earlier than a poor solvent. Accordingly, none of the prior art of record alone or in combination appear to teach, suggest, or render obvious the invention of claim 6.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT THOMAS whose telephone number is (571)270-7737. The examiner can normally be reached on Monday - Thursday, 9:00am-6:00pm (est.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PATRICK RYAN can be reached on (571)272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BT

/PATRICK RYAN/
Supervisory Patent Examiner, Art Unit 1795